United States Environmental Protection Agency
Office of Public Affairs
Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604
Illinois • Indiana
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Ohio • Wisconsin

# U.S. EPA Re-evaluates Cleanup Alternatives for the Skinner Landfill Site

*West Chester, Ohio* *December 1992*

*This fact sheet provides . . .*

- A brief history of the site
- A summary of activities since the July 29, 1992 public meeting
- A brief summary of the five clean-up alternatives
- Information on the U.S. EPA's new preferred alternative
- An explanation of soil vapor extraction
- Information about the West Chester Coalition on the Skinner Landfill Cleanup
- Information on how to learn more about the site

The U.S. Environmental Protection Agency U.S. EPA completed a **Remedial Investigation (RI), Feasibility Study (FS)**, and **Baseline Risk Assessment (RA)**, of the Skinner Landfill site in March 1992. The U.S. EPA distributed a fact sheet summarizing these studies in April, 1992. Two public meetings regarding the results of these studies were held on May 20 and July 29, 1992.

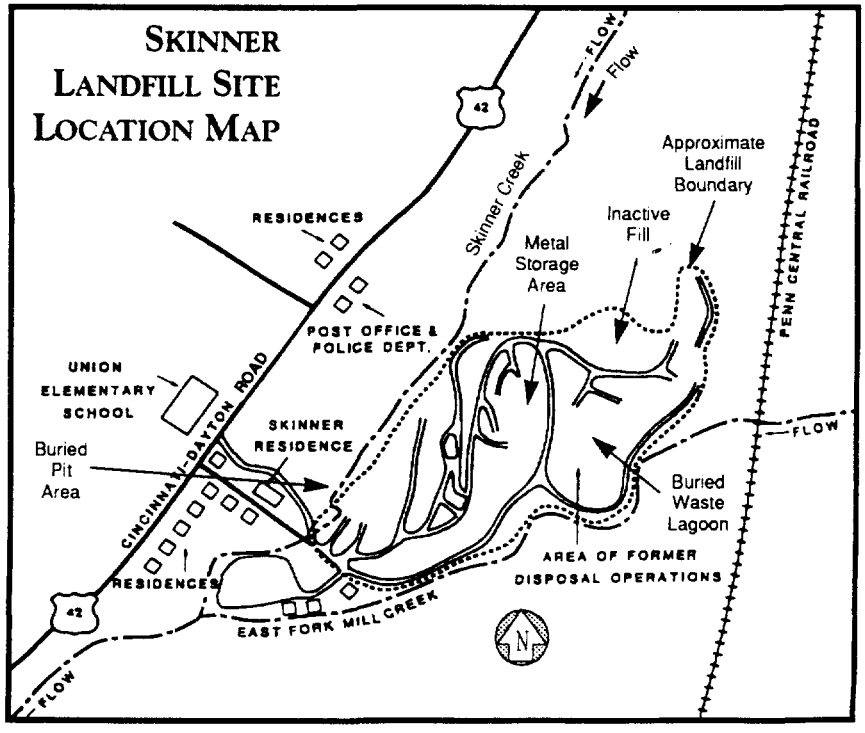
U.S. EPA's primary objective at the Skinner site is to prevent and control the potential for exposure of people to contaminants found at the Skinner site. In addition, the U.S. EPA must ensure that the contaminants found on site do not move off-site at any time in the future. This fact sheet will describe how the U.S. EPA re-evaluated all of the **remedial alternatives** for the Skinner Landfill site.

The preferred cleanup alternative in the original proposed clean up plan involved using incineration to remove contaminants at the site. This fact sheet signals a shift in U.S. EPA's preference from incineration (alternative #5) to containment (alternative #3). The U.S. EPA is inviting the public comment on Alternative #3 and all of the alternatives prior to selecting a final clean up plan. The comment period will conclude on February 9, 1993.

## Public Comment Period

U.S. EPA invites the public to submit comments on the new preferred cleanup alternative for the Skinner Landfill site. Comments must be postmarked by February 9, 1993. Comments may be mailed to:

Ms. Cheryl Allen
Community Relations Coordinator
U.S. EPA (P-19J)
77 West Jackson Blvd.
Chicago, IL 60604-3590



# SITE BACKGROUND

The Skinner Landfill is located approximately 15 miles north of Cincinnati, Ohio in Butler County. The site lies one-half mile south of the intersection of I-75 and Cincinnati-Dayton Road. The Skinner property is comprised of roughly 78 acres of hilly terrain and is bordered on the south by the East Fork of Mill Creek, on the east by railroad tracks, and on the west by the Cincinnati-Dayton Road. Agricultural and wooded land lies south of the site, across the East Fork of Mill Creek. Three ponds and three creeks are located on or adjacent to the Skinner property. The nearest residential area located within the vicinity of the landfill lies to the west, along the Cincinnati-Dayton Road and along the access road to the site. Union Elementary School is located on Cincinnati-Dayton Road, across from the site access road.

The site was used in the past for the mining of sand and gravel. From approximately 1934 through 1990, the site was used for the disposal of a wide variety of wastes, including construction and demolition debris, household refuse, and a variety of chemical wastes. A low area in the center of the site, referred to as the waste lagoon, w : used for the disposal of paint wastes, ink wastes, **creosote**, pesticides, and other chemical wastes. From 1963 to 1976, residents near the site periodically contacted the Butler County Board of Health and Southwestern Ohio Air Pollution Control Agency (SWOAPCA) with complaints about heavy smoke coming from the site. When Ohio Environmental Protexction Agency (OEPA) officials responded to a reported fire at the site in 1976, they noticed a lagoon containing a black, oily liquid. Officials returned with a search warrant and found over one hundred 55-gallon drums reportedly containing industrial and chemical wastes. Mr. Skinner is reported to have told them that the landfill contained buried mustard gas, nerve gas, and various explosive devices. OEPA and U.S. Army officials returned to the site to inspect and sample the lagoon area, at this time Mr. Skinner retracted his claims that **ordnance** and explosive devices were present at the site. Record searches performed by the U.S. Army have revealed no records indicating the shipment of ordnance or explosives from the U.S. Army to the Skinner site. The samples were found to contain pesticides, **some volatile organic compounds (VOCs)**, and heavy metals.

Between August 1977 and January 1979, the OEPA and the Ohio Attorney General's Office tried repeatedly to obtain a court order requiring the Skinners to remove the wastes disposed of on the site. The court rejected those requests but ordered the Skinners to stop all disposal activities unless granted permission by the OEPA and the Butler County Board of Health. In 1982, the Skinner property was placed on the **National Priorities List (NPL)** of sites needing to be investigated and cleaned up. The initial phases of a Remedial Investigation and Feasibility Study (RI/FS) began in September 1984. By 1987 the U.S. Environmental Protection Agency and its contractors completed Phase I of the Remedial Investigation, and the report was issued in December 1988. U.S. EPA initiated Phase II of the RI and the FS in January 1989. The completed RI determined the extent of contamination. The Baseline RA examined current and future risks from the site, and the FS identified and compared five potential remedial action alternatives for the Skinner Landfill site.

# THE FIVE REMEDIAL ALTERNATIVES

In April 1992 five remedial alternatives were presented to the public. These five alternatives were identified through an FS. The purpose of the FS was to identify and evaluate various cleanup strategies for the Skinner Landfill Site that would protect public health and the environment in a manner that is safe, practical, and acceptable to those concerned with the site. Regardless of which alternative the U.S. EPA chooses, the remedy will achieve two objectives: (1) reduce and control the movement of contaminants from the buried waste lagoon and other areas from the site to the ground waters, surface water, soil and air; (2) manage the seeping of in order to protect nearby creeks as well as the people who may come in conta with them.

*The FS for the Skinner Landfill identified five separate remedial alternatives. These are summarized as follows:*

**Alternative 1**
- No Action

**Alternative 2**
- Incineration of lagoon wastes
- Capping (multi-layer)
- Control of ground water using slurry walls and collection trenches
- Collection and treatment of contaminated ground water

**Alternative 3** *(U.S. EPA's New Preferred Cleanup Alternative)*
- Capping (multi-layer)
- Control of ground water using slurry walls and collection trenches
- Collection and treatment of contaminated ground water

**Alternative 4**
- Capping (single-layer)
- Control of ground water using slurry walls and collection trenches
- Collection and treatment of contaminated ground water

**Alternative 5** *(U.S. EPA's Orginal Preferred Cleanup Alternative)*
- Incineration of lagoon wastes
- Capping (multi-layered)
- Control of ground water using slurry walls and collection trenches
- Collection and treatment of contaminated ground water
- Soil vapor extraction

## ACTIVITIES SINCE THE JULY 29, 1992 PUBLIC MEETING

A public meeting to discuss the five cleanup alternatives, the proposed plan and to collect public comments was held on May 20, 1992. A second public meeting was held on July 29, 1992 in order to address some of the questions raised at the May 20, 1992 meeting. A transcript of the May 20, 1992 meeting and audio tapes of the July 29, 1992 meeting are available for review at the Information Repository.

Due to concerns expressed at the meeting by the public and local government officials, the U.S. EPA decided to alter its decision making approach to this site. A decision was made to divide the site cleanup into two components. A decision on the first component of the site cleanup (the major aspects of the remedy such as incineration, capping and groundwater treatment), was delayed pending further public input. A decision to implement the minor aspects of the remedy (fencing and the provision of an alternative water supply) was finalized in a **Record of Decision (ROD)**. A public comment period was held from April 23, 1992 to August 31, 1992 to allow the public to comment on the proposed activities set forth in this ROD. The finalized ROD was signed on September 30, 1992, and is available for review in the Information Repository.

# U.S. EPA RECONSTRUCTS REMEDY: FROM ALTERNATIVE 5 TO ALTERNATIVE 3

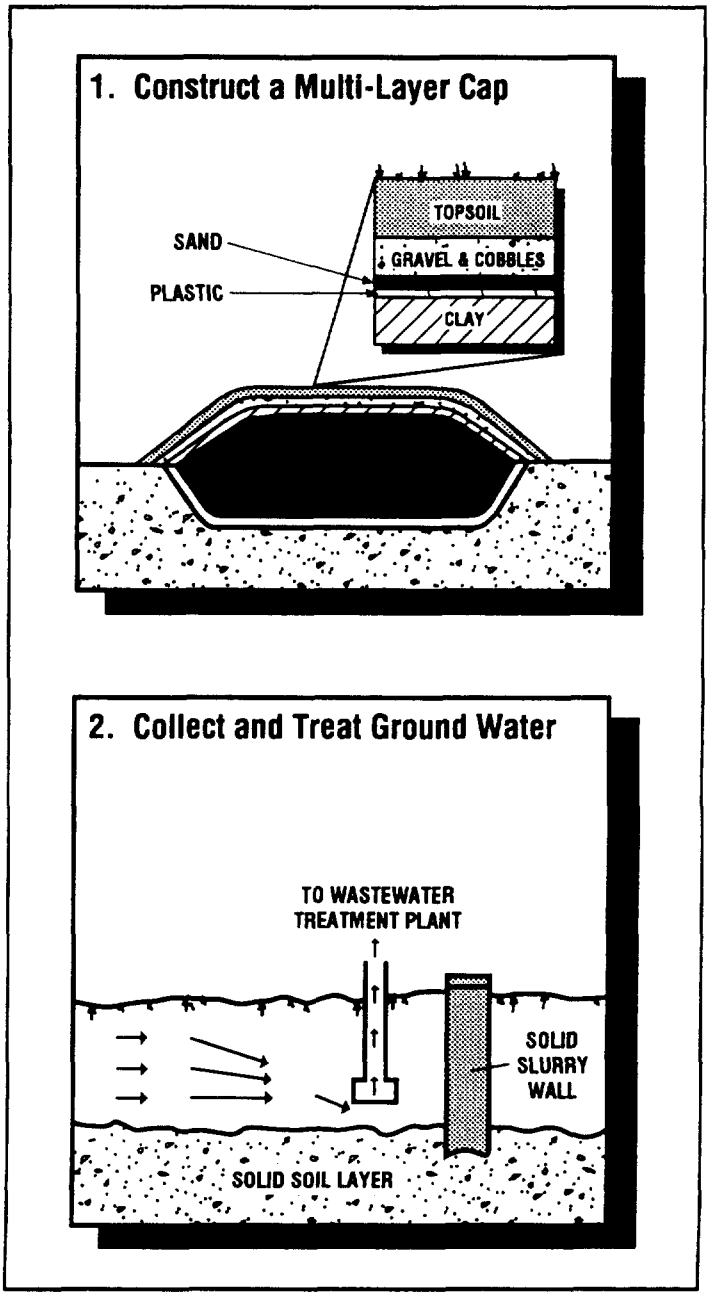
The original preferred alternative for the Skinner Landfill site was Alternative 5. Unfortunately, there are no clear-cut definitive answers to what is the right remedy for this site. It would be possible for a reasonable scientific expert to select either incineration or containment for this site. The U.S. EPA has changed its preference from incineration to containment. Before we look at the reasons for the change, we will take a look at alternative 3 in detail.

### ALTERNATIVE 3:
### Consolidation and Multi-Layer Capping of Soils; Collection and Above Ground Treatment of Ground Water

A multi-layered landfill cap would be installed over the former dump and waste lagoon areas. The purpose of this cap is to reduce the amount of precipitation which seeps into the ground and flows through the contaminated waste materials. The cap would be composed of a "layer cake" of clay, plastic, sand, rock cobbles and soil. Contaminated soils from other areas of the site would be consolidated underneath this cap.

The flow of groundwater through the site will be controlled. This may be accomplished by installing a barrier wall in the ground. This barrier wall (slurry wall) would be designed to help lower the water table beneath the former dump and waste lagoon, so that contact between the ground water and the contaminated materials is minimized. Contaminated ground water which is flowing away from the buried waste lagoon areas currently discharges into the on-site creeks. This water will be intercepted, collected and treated.

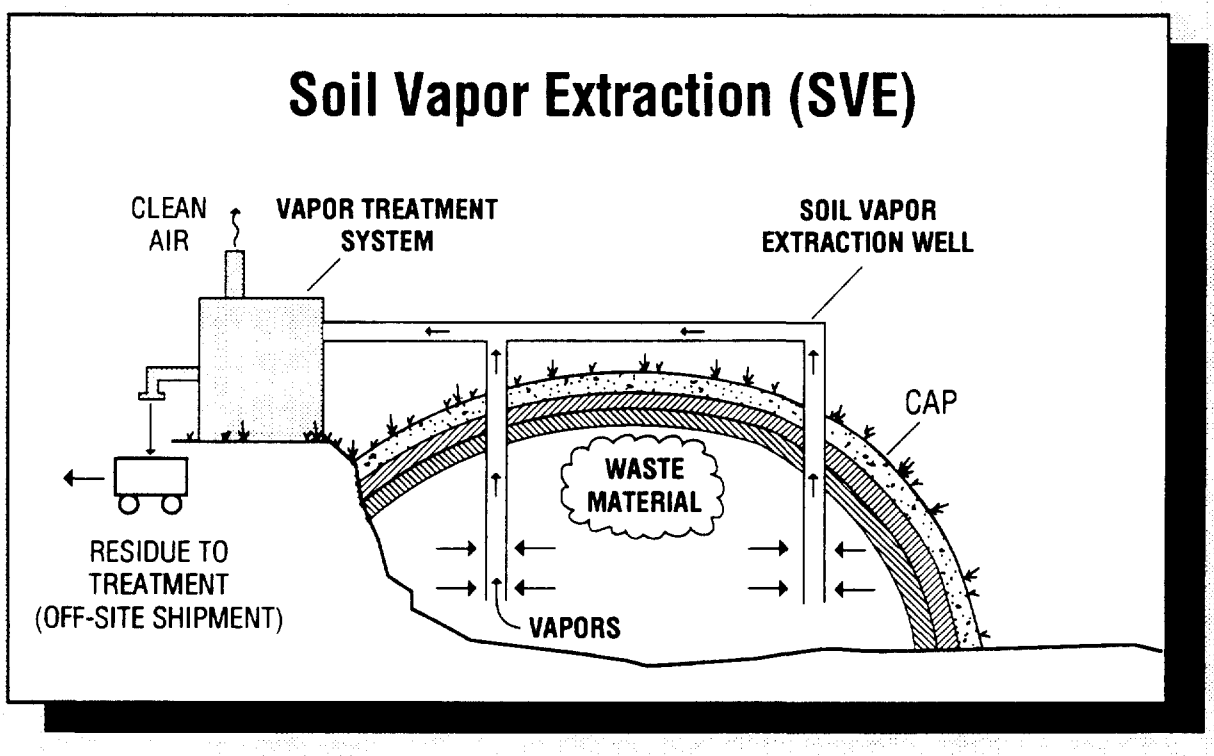
Deed restrictions would be provided to prevent future land uses which could degrade the remedy's effectiveness. A monitoring program would be designed to detect any contaminants which could be mobilized from the site.



# Inclusion of Soil Vapor Extraction (SVE)

It has been suggested that U.S. EPA include **soil vapor extraction (SVE)** as a component of the containment remedy. U.S. EPA will consider including the extraction of vapors from the permeable materials surrounding the waste lagoon area as part of the remedy. Through soil vapor extraction, contaminated air is pumped out of the ground and treated.

**The U.S. EPA is currently considering the inclusion of soil vapor extraction (SVE) as a treatment system in Alternative 3. The SVE component of Alternative 3's remedy would consist of several vapor-extraction wells and an air-treatment system. The vapor-extraction wells draw air containing volatile organic compounds (VOCs) from the area around the waste materials to the surface of the capped landfill, where the air is treated to air-quality standards in the air treatment system. The objective of the SVE system is to capture vapors from the waste materials prior to their emission. As a result, not only is the filtration of water through the waste materials reduced by the cap, but the VOCs are captured and their site risks are reduced.**



# WHY DID U.S. EPA CHANGE ITS PREFERRED CLEANUP ALTERNATIVE?

The U.S. EPA has changed its preference from incineration to containment for the following reasons. The first, is strong community opposition to incineration. One of the aspects which must be taken into account when U.S. EPA selects a remedy for any Superfund site is community acceptance. There has been a considerable amount of opposition to incineration in West Chester. U.S. EPA continues to believe that incineration is a viable and effective technology which could be safely applied at the Skinner site. However, U.S. EPA does not believe that community acceptance of this option can be readily obtained in West Chester.

The second is based on scientific judgement. The hazardous substances in the waste lagoon area include many chemicals which are capable of migrating into the ground water. This is the primary reason incineration was initially selected as the preferred cleanup alternative. However, large-scale migration of these contaminants into the ground water has not yet occurred. If alternative 3 is implemented, it is possible that no further major cleanup will ever be needed at this site. However, if it is shown in the future that the waste materials are migrating from this site, then it may be necessary to return to this site and incinerate the waste lagoon materials. For this reason extensive monitoring for contaminant migration is a necessary part of a containment remedy for this site.

In expressing a preference for alternative 3, U.S. EPA is stating its belief that a containment remedy may be effective. U.S. EPA feels that it would be best to implement a containment remedy, and determine whether it works first, before resorting to the more intrusive measures set forth in alternative 5 (i.e. excavation and incineration).

### INCINERATION VS. CONTAINMENT

The main difference between the incineration alternative and the containment alternatives lies in the permanence of the remedy. A containment remedy such as alternative 3 would involve leaving the lagoon wastes in the ground at the Skinner site. It is possible that the lagoon wastes will largely stay in place over the long term (i.e. that migration will be minimal). It is also possible that significant migration of lagoon wastes will occur in the future, and the U.S. EPA will have to revisit this site and excavate and destroy the lagoon wastes.

### RE-EVALUATION OF REMEDY AFTER CLEANUP

The superfund law specifies that where a remedy involves leaving the hazardous substances on site, the remedy must be periodically (i.e. at least every five (5) years) re-evaluated to assure that the remedy is protective of human health and the environment. This re-evaluation will have to involve, among other things, detailed monitoring for the potential migration of contaminants from the site into the ground water. These periodic evaluations will have to be performed as long as hazardous substances remain on site.

## How Does U.S. EPA Evaluate Cleanup Alternatives?

By answering the following questions, U.S. EPA forms the basis for selecting the final cleanup plan at Superfund sites.

**Overall Protection of Public Health and the Environment:** Will a particular remedy provide adequate protection of human health and the environment? Will the risks posed through each exposure pathway be eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls?

**Compliance with Applicable or Relevant and Appropriate Requirements (ARARs):** Will a particular remedy meet all of the ARARs of federal and state environmental laws and, if not, does it justify a waiver?

**Long-Term Effectiveness and Permanence:** What will the remaining risk be once the cleanup goals have been met? Will the remedy maintain reliable protection of human health and the environment over time?

**Reduction of Contamination Toxicity, Mobility, and Volume Through Treatment:** What is the anticipated performance of the treatment technologies under a particular remedy?

**Short-Term Effectiveness:** How long will it take to achieve protection, and what will be the risk to human health and the environment during the construction and implementation period?

**Implementability:** What is the technical and administrative feasibility of a particular remedy, including the availability of materials and services needed to implement it?

**Cost:** What will be the estimated initial capital cost and the cost of operation and maintenance? The total cost is expressed as a present value cost.

**State/Support Agency Acceptance:** Will a particular remedy meet with state or agency approval or will portions of the remedy meet with opposition? Will a proposed remedy meet all state ARARs or will proposed waivers be accepted?

***Community Acceptance:** What is the public's general and written response to the alternatives described in the Proposed Plan and in the RI/FS? An evaluation of this criterion cannot be completed until after the public comment period is held.

## West Chester Coalition on the Skinner Landfill Cleanup

In August 1992, a coalition of various West Chester community groups and residents was formed to meet with representatives of the U.S. EPA and Ohio EPA and to discuss the Skinner Landfill cleanup. This coalition includes representatives from Township Boards, the Chamber of Commerce, Citizens Lobby for Environmental Action Now (C.L.E.A.N.), the Union Township school board, the Old West Chester Merchants Association, the Union School Parent Teachers Association (PTA), the Home Builders Association and a number of local residents.

Representatives of the U.S. EPA and OEPA have been meeting with the West Chester coalition biweekly for the last three months. Meetings have covered a broad range of topics, including site description; distribution of contamination, site history; army waste issues; RCRA waste classification; the "2000 foot rule"; and alternative technologies for cleanup of the lagoon waste materials. As a result, this coalition has unanimously recommended that the containment remedy be implemented at the Skinner site.

## Public Comment Invited

Comments provided by residents and other interested parties are valuable in helping U.S. EPA select a final cleanup plan for the site. U.S. EPA encourages you to share your views about the new recommended cleanup plan and the other alternatives presented in the Feasibility Study. You can make your views known to U.S. EPA by sending your written comments to Cheryl L. Allen, the Community Relations Coordinator for the Skinner Landfill site. You can use the public comment sheet provided as part of this fact sheet or address a letter to her at the address listed below.

U.S. EPA will respond to all significant comments in a document called a Responsiveness Summary. The Responsiveness Summary will be attached to the ROD and will be made available to the public in the Information Repository and Administrative Record file. The Remedial Investigation Report, the Feasibility Study, and other documents related to Skinner Landfill site are available at the Information Repository described in this fact sheet.

The comment period for this portion begins on January 11, 1992 and will conclude February 9, 1993.

### *FOR MORE INFORMATION:*

**U.S. EPA CONTACTS**

Jim Vanderkloot
Remedial Project Manager
U.S. EPA (HSRM-6J)
77 West Jackson Blvd.
Chicago, IL 60604-3590
(312) 353 - 9309
Toll free: 1(800) 621-8431

Cheryl L. Allen
Community Relations Coord.
U.S. EPA (P-19J)
77 West Jackson Blvd.
Chicago, IL 60604-3590
(312) 353-6196

**OHIO EPA CONTACTS**

Kathy Lee Fox
Site Coordinator
Ohio EPA
40 South Main Street
Dayton, OH 45402-2086
(513) 285-6357

Sean Graham
Public Involvement Coord.
Ohio EPA
1800 WaterMark Drive
P.O. Box 1049
Columbus, OH 43266-0149
(614) 644-2160

**INFORMATION REPOSITORY**

Information repositories contain laws, work plans, community relations plans, and other documents about the investigation of Superfund sites. Anyone who would like additional information about the Skinner Landfill site is encouraged to read the documents available at the Information Reposito
Ask for the Skinner Landfill Superfund Information Repository at:

Union Township Library
27900 Cox Road
West Chester, OH 45069
(513) 777-3131

Hours: 10:00 am - 8:30 pm (M - F)
10:00 am - 5:00 pm (Saturday)
1:00 pm - 5:00 pm (Sunday - Winter only

# U.S. EPA Welcomes Your Comments On The Cleanup Of The Skinner Landfill Site

The U.S. Environmental Protection Agency welcomes your input regarding the cleanup of the Skinner Landfill site. If you have any comments, questions, or concerns regarding the information presented in this fact sheet, please record them on this form and send it to U.S. EPA. You may attach additional sheets if necessary. Comments must be postmarked by February 9, 1993. You may also call either Cheryl L. Allen, the Community Relations Coordinator, or Jim VanderKloot, the Remedial Project Manager, toll-free at 1-800-621-8431.

Signature: _____

Name: _____

Affiliation: _____

Address: _____

City: _____ State: _____ ZIP: _____

*Fold on dotted lines, close with transparent tape, and mail.*

Name:_____

Address: _____

City: _____ State:_____

ZIP: _____

PLACE
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HERE

CHERYL L ALLEN
COMMUNITY RELATIONS COORDINATOR
U S ENVIRONMENTAL PROTECTION AGENCY (P-19J)
77 W JACKSON BLVD
CHICAGO IL 60604-3590

# GLOSSARY OF TERMS

**Applicable or Relevant and Appropriate Requirements (ARARs):** Federal and state environmental requirements that a selected cleanup remedy will attain. These requirements include allowable air emissions and allowable levels of contaminants in site soils, sediment, water, etc.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):** This law, widely known as "Superfund," authorizes the Federal government to respond directly to releases of hazardous substances that may endanger public health or the environment. U.S. EPA is responsible for managing this program.

**Creosote:** An oily liquid made from wood tar or coal tar, often used as an antiseptic or as a wood preservative.

**Leachate:** A liquid, usually derived from rain or snow, that has soaked through wastes and picked up components of those wastes.

**National Priorities List (NPL):** U.S. EPA's list of sites of environmental contamination that are eligible for federal money under the Superfund program.

**Ordnance:** Military weapons such as artillary shells, ammunition, and land mines.

**Record of Decision (ROD):** An official document issued after the Remedial Investigation and Feasibility Study that describes U.S. EPA's selected remedy for cleaning up a site.

**Remedial Alternatives:** A method or combination of methods designed to protect public health, welfare, and the environment over the long term from releases of hazardous substances at a Superfund site. Remedial alternatives are usually projects or a combination of technologies that contain, remove, or destroy most of the contaminants in the air, water, soil, and/or ground water at a Superfund site.

**Remedial Investigation/Feasibility Study (RI/FS):** Two distinct, but related, studies conducted as part of the Superfund cleanup process. The first study is the Remedial Investigation (RI) which examines the nature and extent of contamination problems at the site. The second is the Feasibility Study (FS), which evaluates different methods to clean up the contamination problems found during the remedial investigation.

**Risk Assessment (RA):** A statistical evaluation of the potential health effects associated with the types, concentrations, and locations of contaminants identified at a site. The risk assessment attempts to predict the probability of adverse effects to human health under specific present circumstances and under hypothetical future circumstances.

**Soil Vapor Extraction (SVE):** A pumping system using underground pipes that draws air through contaminated soil to remove organic contaminants. The contaminated air is treated and released into the atmosphere or returned to the system.

**Volatile Organic Compounds (VOCs):** Organic chemicals such as toluene, vinyl chloride, trichloroethylene (TCE), and benzene that vaporize easily.

## MAILING LIST REQUEST FORM

If you are not currently on the Skinner Landfill Superfund site mailing list and would like to be added, please complete this form, detach, and mail to:

Cheryl L. Allen
Community Relations Coordinator
Office of Public Affairs (P-19J)
U.S. EPA, Region 5
77 West Jackson Blvd.
Chicago, IL 60604-3590

Dear Ms. Allen:

Please place my name on the Skinner Landfill site mailing list.

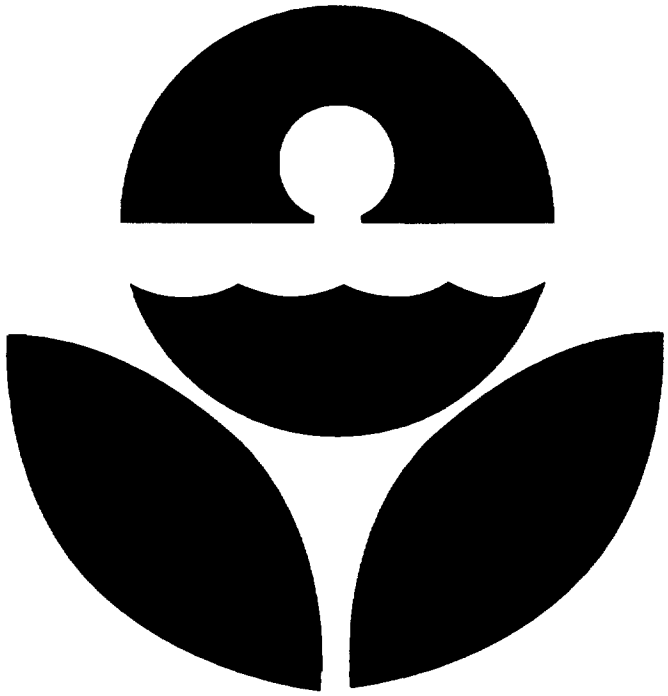
Name _____

Affiliation _____

Address _____

City _____ State _____ Zip _____

Telephone ( _____ ) _____



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